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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

de JONG et al.

Application No: 09/275,727

Filed: March 24, 1999

For: STORAGE AREA NETWORK
ADMINISTRATION

) Attorney Docket No: ADAPP091A

) Examiner: Tran, Mylinh T.

) Group Art Unit: 2179

) Date: August 29, 2005

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on August 29, 2005.

Signed: _____

Kenneth D. Wright

TRANSMITTAL OF REPLY BRIEF
(PATENT APPLICATION -- 37 CFR 1.193)

Mail Stop: Appeal Brief-Patents

Commissioner for Patents
Alexandria, VA 22313-1450

Sir:

This Reply Brief is in response to the Examiner's Answer mailed June 29, 2005. The due date for this Reply Brief is August 29, 2005.

Applicants believe that no fees are due in connection with the filing of this Reply Brief. However, the Commissioner is authorized to charge any required fees unknown to the Applicants to Deposit Account No. 50-0850, (Order No. ADAPP091A). One additional copy of this transmittal is enclosed for potential fee processing.

Respectfully submitted,
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Application No.: 09/275,727
Reply Brief Dated August 29, 2005
Reply to Examiner's Answer of June 29, 2005

PATENT

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Kenneth D. Wright

REPLY BRIEF

Mail Stop: Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This Reply Brief is in response to the Examiner's Answer dated June 29, 2005. This Reply Brief is filed within the two-month time period extending to August 29, 2005. Please enter the following remarks.

The Listing of Claims on Appeal begins on page 2 of this Reply Brief.

Remarks/Arguments begin on page 7 of this Reply Brief.

LISTING OF CLAIMS ON APPEAL

1. A storage area network management and configuration system, comprising:
an enterprise network including a plurality of computer systems, the plurality of computer systems including server computer systems and client computer systems, wherein the server computer systems include a server component and the client computer systems include a client component;

a storage enclosure connected to a server computer system having the server component, the storage enclosure having a RAID array of disks; and

a graphical user interface provided by the client component at a client computer system, the graphical user interface being defined to enable a user to physically build and modify the RAID array of disks of the storage enclosure connected to the server computer system from the client computer system without requiring the user to locally interact with the server computer system.

2. A storage area network management and configuration system as recited in claim 1, further comprising:

an array modifier tool configured to allow online modification of a capacity and cache parameters of a disk array.

3. A storage area network management and configuration system, comprising:
an enterprise network including a plurality of computer systems, the plurality of computer systems including server computer systems and client computer systems, wherein the server computer systems include a server component and the client computer systems include a client component;

a storage enclosure connected to a server computer system having the server component; and

a graphical user interface provided by the client component at a client computer system, the graphical user interface being defined to provide functional tools to enable a user of the client computer system to physically build a RAID array of disks either from scratch or through application of a RAID building template without requiring the user to locally interact with the server computer system.

4. A storage area network management and configuration system as recited in claim 3, wherein the functional tool to enable the user of the client computer system to build the RAID array of disks through application of a RAID building template, comprises:

a first container defined to enable selection of disks to be used in building the RAID array of disks, wherein the disks reside within a storage enclosure present within the enterprise network;

a second container defined to enable selection of the RAID building template that contains a RAID configuration scheme that is optimally selected for a particular storage application; and

code for dragging the selected RAID building template, that is in the form of an icon, over the selected disks or dragging the selected disks over the selected RAID building template, the dragging is configured to automatically apply the RAID configuration scheme.

5. A storage area network management and configuration system as recited in claim 4, wherein the RAID configuration scheme includes,

a RAID level;

- a number of drives in the selected hardware;
- a number of spare drives;
- a stripe size; and
- an array address.

6. A storage area network management and configuration system as recited in claim 1, further comprising:

- an enterprise monitor tool configured to provide a window wherein monitoring settings can be set.

7. A storage area network management and configuration system as recited in claim 6, wherein the monitoring settings includes,

- a failure indicator; and
- a disk capacity indicator.

8. A storage area network management and configuration system as recited in claim 7, wherein the monitoring settings further include,

- a temperature indicator for the storage enclosure;
- a battery health indicator; and
- a power supply health indicator.

9. A storage area network management and configuration system as recited in claim 6, further comprising:

- an enterprise monitor window for providing a quick view of selected storage enclosure parameters.

10. A storage area network management and configuration system as recited in claim 1, further comprising:

an event notifier configured to provide customizable failure and status notifications associated with storage enclosures within the enterprise network.

11. A storage area network management and configuration system as recited in claim 10, wherein the customizable failure and status notifications include,

setting user notification profiles, the profiles include communication information.

12. A storage area network management and configuration system as recited in claim 11, wherein the communication information includes e-mail information and pager information.

13. A storage area network management and configuration system as recited in claim 1, further comprising:

an enterprise icon that when selected allows viewing of the enterprise network that includes the plurality of computer systems and associated storage enclosures that are connected to server computer systems having the server component.

14. A storage area network management and configuration system as recited in claim 13, wherein the viewing of the enterprise network can be of physical devices or logical devices, and the physical devices and the logical devices can be displayed in one of a tree view and a quick view.

15. A storage area network management and configuration system as recited in claim 14, further comprising:

a graphical failure representation provided for selected drives of the storage enclosure, the graphical failure representation being configured to be displayed on a failed drive when the failed drive is in a viewable setting and on the storage enclosure when the failed drive is not in the viewable setting.

16. A storage area network management and configuration system as recited in claim 1, wherein the client component provides a user administrator the management and configuration control to the storage enclosure of the enterprise network.

17. A storage area network management and configuration system as recited in claim 1, wherein the enterprise network can include a plurality of storage enclosures that are connected to selected computer systems that are part of the enterprise network and that have the server component.

REMARKS/ARGUMENTS

This Reply Brief is in response to the Examiner's Answer dated June 29, 2005. This Reply Brief is filed within the two-month time period extending to August 29, 2005.

Response to Examiner's Answer

The Examiner has repeatedly stated that combination of the teachings of Ofer and Axberg is motivated by a desire "to produce cost-effective, highly available, high performance disk system by using the RAID that is a collection of multiple disk drives being organized into a disk array managed by a common array controller." The Applicants submit that the above-stated motivation is not sufficient to suggest combining the reference teachings in the specific manner suggested by the Examiner. Furthermore, the above-stated motivation is not derived from the references themselves.

The Applicants submit that there is no suggestion or motivation, either explicitly or implicitly, in either Axberg or Ofer to have combined the teachings of Axberg and Ofer to arrive at the present invention. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. MPEP §2143.01 However, the level of ordinary skill in the art cannot be relied upon to provide the suggestion to combine references. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308, 50 USPQ2d 1161 (Fed. Cir. 1999). Although the Examiner indicates that the motivation for combining the cited references is contained in the references, it is respectfully submitted that no actual page or line cite of such motivation was specifically identified by the Examiner.

The Examiner continues to assert the same grounds of rejection addressed in the Appeal Brief filed April 4, 2005. Therefore, the Applicant's arguments presented in the Appeal Brief continue to be argued against the rejections of the claims on appeal. In the interest of brevity, the Applicant's respectfully request the Board of Patent Appeals and Interferences (the "Board") to refer to the Applicant's Appeal Brief of April 4, 2005, for a full explanation of the Applicant's position with respect to the Examiner's rejections. The remainder of the present Reply Brief responds specifically to the Examiner's comments as provided in the "Response to Argument" section of the Examiner's Answer.

The Examiner continues to incorrectly assert that the host computer as taught by Ofer is analogous to the client system recited in claim 1. When considering claim 1, it should be understood that the storage area network management and configuration system includes both client computer systems and server computer systems, wherein the client computer systems include a client component and the server computer systems includes a server component. Furthermore, it should be understood that the server computer system (not the client computer system) is connected to the storage enclosure. Additionally, the graphical user interface (GUI), defined to enable a user to physically build and modify the RAID array of disks of the storage enclosure, is provided by the client component at the client computer system. The GUI is not provided by the server component at the server computer system. It should be appreciated that that present invention enables a user to physically build and modify the RAID array of disks of the storage enclosure without having to locally interact with the server computer system that is connected to the storage enclosure. More specifically, using the GUI provided by the client component at the client computer system, a user can communicate instructions from the client component to the server component at the server computer system to physically build and modify the RAID array of disks of the storage enclosure to which the server computer system is connected.

With respect to Ofer, the host computer 20 is directly connected to the storage controller 12. Moreover, Ofer (column 3, first paragraph) goes on at length about the bus 16 between the host computer 20 and the storage controller 12 being a standard SCSI bus. Because the host computer 20 of Ofer is connected to the storage controller 12, the host computer 20 of Ofer does not suggest the client computer system as recited in claim 1. Rather, the host computer 20 of Ofer in combination with the special command functions of Ofer (column 3, second paragraph) can only reasonably be construed as representing the server computer system of claim 1, which is connected to the storage enclosure.

The Examiner asserts that the host computer 20 of Ofer is a "client system" of the storage controller 12. However, this assertion by the Examiner simply represents an attempt at hindsight reconstruction of the present invention. Because the host computer 20 of Ofer is directly connected to the storage controller 12, any use of the host computer 20 or a GUI operating on the host computer 20 to manage the storage controller 12 represents a local interaction with a computer connected to the storage controller 12. The present invention as embodied in claim 1 is specifically directed to enabling management of a storage enclosure without requiring local interaction with a server computer system connected to the storage enclosure. Simply stated, in contrast to the present invention, user interaction with the host computer 20 of Ofer to manage the storage controller 18 represents a local interaction with a server computer system that is connected to the storage controller 18.

The Examiner's rejection regarding the GUI provided by the client component at the client computer system is contingent upon successfully establishing that the host computer 20 of Ofer actually represents a client computer system as recited in claim 1. However, as argued in the Appeal Brief and above, the host computer 20 of Ofer simply does not represent a client computer system within the scope of the present invention as recited in

claim 1. Rather, the host computer 20 of Ofer is more representative of the server computer as recited in claim 1. It should be appreciated that the GUI recited in claim 1 is not provided by the server computer system. Rather, claim 1 is quite specific in reciting that the GUI is provided by the client component which is included within the client computer system. Therefore, the Examiner's position that Ofer teaches the GUI provided by the client component at the client computer system, as recited in claim 1, is without basis.

In the "Response to Argument" section of the Examiner's Answer, the Examiner has provided a new ground of rejection based on the teachings of Ofer regarding a personal computer (PC) 24. It should be recognized that the "Grounds of Rejection" as recited by the Examiner in each of the Final Office Action and the Examiner's Answer include nothing regarding the PC 24 of Ofer. Therefore, on page 10 of the Examiner's Answer, the entire discussion extending from line 2 through line 16 represents a new ground of rejection. Any new ground of rejection made in an Examiner's Answer must be approved by a Technology Center Director or designee and prominently identified in the Grounds of Rejection to be Reviewed on Appeal section and in the Grounds of Rejection section of the Examiner's Answer. Thus, the Examiner's Answer of June 29, 2005, is not in appropriate form. Nevertheless, with respect to the new grounds of rejections as identified above, the Applicants request that the appeal be maintained. The new grounds of rejection are addressed immediately below.

The Examiner has asserted that the personal computer (PC) 24 as taught by Ofer, represents some relevant teaching to support the rejection of claim 1. However, the Examiner has not clearly indicated the relevance of Ofer's PC 24 with respect to claim 1. More specifically, the Examiner has merely quoted some disclosure from Ofer regarding the PC 24 without specifically indicating whether the PC 24 is asserted to represent the server computer system of claim 1 or the client computer system of claim 1. The

Examiner's basis of rejection with regard to the PC 24 of Ofer is at best confusing and incomplete.

If the PC 24 of Ofer is asserted to represent the client computer system of claim 1, the assertion is incorrect. Because the PC 24 is in direct communication with the storage controller 12, any user interaction at the PC 24 would represent a local interaction to manage the storage controller 12. Therefore, if the PC 24 of Ofer is asserted to represent the client computer system of claim 1, all of the previous arguments with respect to the host computer 20 of Ofer would be equally applicable to the PC 24 of Ofer.

If the PC 24 of Ofer is asserted to represent the server computer system of claim 1, Ofer fails to teach the server component included within the server computer system. Additionally, if the PC 24 of Ofer is asserted to represent the server computer system of claim 1, the client computer system within the enterprise network and including the client component is taught. Furthermore, because the client component is not taught, it is not reasonable to conclude that the GUI defined to enable a user to physically build and modify the RAID array of disks of the storage enclosure is taught as being provided by the client component.

With regard to the Axberg reference, the Examiner has stated that provision of an option to print or save a storage network configuration by the storage management program 331, is equivalent to physical building and modification of a RAID array of disks. The Applicants respectfully submit that the mere printing or saving of a storage network configuration to be later implemented is not in any way equivalent to actual physical building and modification of a RAID array of disks. The Examiner has suggested that Axberg's teachings extend beyond merely planning a storage network configuration to actually implementing the storage network configuration. To support this suggestion, the Examiner has referred to Axberg's title. The Applicants respectfully submit that Axberg

does not include any teachings beyond simply planning a storage network configuration. Axberg is silent with regard to a system for storage area network management and configuration that enables actual physical modification of the storage area network. Reliance by the Examiner on the title of Axberg, rather than some substantive teaching within Axberg, is evidence in itself that Axberg does not include teachings beyond simply planning a storage network configuration. Therefore, the Applicants position that Axberg merely teaches a tool for planning a storage network configuration is accurate.

The Examiner continues to assert that Ofer (column 4, lines 53-67, and Figure 3) teaches a GUI defined to enable a user to physically build and modify the RAID array of disks of the storage enclosure connected to the server computer system. The GUI as taught by Ofer simply allows a user to modify the interconnections of the storage devices 14 and the host ports at the storage controller 12, such that the entire logical structure of the disk storage system can be modified. Those skilled in the art will appreciate that a RAID array of disks is defined by more than just the physical connections between the disks and the storage controller. More specifically, the RAID array of disks is also defined by a RAID configuration that is implemented to cause a prescribed set of operations to occur among the disks defining the RAID array. The teachings of Ofer as referred to by the Examiner do not include any mention of modifications beyond the logical structure of the disk storage system. Thus, the GUI as taught by Ofer does not provide for physical building and modification of a RAID array of disks. Additionally, the Examiner has referred to Axberg as teaching a GUI for physical building and modification of a RAID array of disks. However, as previously discussed, the teachings of Axberg do not extend beyond merely planning a storage network configuration.

With regard to claim 3, the Examiner has asserted that the GUI of Ofer teaches functional tools to enable a user of a client computer system to physically build a RAID

array of disks either from scratch or through application of a RAID building template. As discussed above, the GUI as taught by Ofer simply allows a user to modify the interconnections of the storage devices 14 and the host ports at the storage controller 12, such that the entire logical structure of the disk storage system can be modified. Because physical building of a RAID array of disks involves more than simply modifying interconnections of storage devices and host ports, the GUI of Ofer falls short of teaching the GUI of claim 3 that is defined to physically build a RAID array of disks either from scratch or through application of a RAID building template. Furthermore, both Ofer and Axberg are silent regarding application of a RAID building template. Additionally, with regard to features of claim 3 that are similar to features of claim 1, the combination of Axberg and Ofer fails to teach the features of claim 3 for the same reasons previously discussed with respect to the similar features of claim 1.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). For at least the reasons discussed above and in the Appeal Brief of April 4, 2005, the Applicants submit that the combined references fail to teach or suggest each and every feature the respective claims on appeal.

The Applicants submit that each of claims 1 and 3, and their respective dependent claims, is patentable over the combined teachings of Axberg and Ofer. Therefore, the Board is respectfully requested to overturn the Examiner's rejections of claim 1-17 under 35 U.S.C. §103(a).

If the Examiner has any questions concerning the present Reply Brief, the Examiner is requested to contact the undersigned at (408) 774-6914. If any other fees are due in connection with filing this Reply Brief, the Commissioner is also authorized to charge

Deposit Account No. 50-0805 (Order No. ADAPP091A). A duplicate copy of the transmittal is enclosed for this purpose.

Respectfully submitted,
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